

## V. ABSTRACT

5 This invention describes a method and apparatus for a liquid dispensing cartridge  
pump suitable for dispensing reagent in an automatic system. In embodiments, the present  
invention may include a liquid metering chamber that accurately controls the amount of  
fluid dispensed. In other embodiments, the amount of fluid may be controlled by the action  
of a diaphragm, which may be assembled into a cavity of a dispenser housing creating a  
metering chamber. In another embodiment, the volume created by the metering chamber  
10 determines the volume of dispensed fluid. When the diaphragm is compressed from its free  
or extended state to its inverted state, it may substantially conform to the inner surface of the  
metering chamber. The fluid enters the metering chamber through an upper unidirectional  
valve and exits the dispenser housing through a lower unidirectional valve.

15